

Title (en)
SURFACE-TREATED STEEL FOIL FOR CURRENT COLLECTORS

Title (de)
OBERFLÄCHENBEHANDELTE STAHLFOLIE FÜR STROMABNEHMER

Title (fr)
FEUILLE D'ACIER TRAITÉE EN SURFACE POUR COLLECTEURS DE COURANT

Publication
EP 4332274 A1 20240306 (EN)

Application
EP 22795921 A 20220428

Priority

- JP 2021076894 A 20210428
- JP 2022019465 W 20220428

Abstract (en)
[Object]To provide a surface treated steel foil for a current collector, the surface treated steel foil having suitable hydrogen barrier properties.[Solving Means]A surface treated steel foil for a current collector, the surface treated steel foil having a first surface and a second surface located on a side opposite to the first surface, includes a base material formed of a steel and an iron-nickel alloy layer that is laminated on the base material on the first surface side and/or the second surface side. The iron-nickel alloy layer contains $\text{Fe}_{1-x}\text{Ni}_x$ as an alloy phase. With respect to the surface including the alloy layer, the ratio of the maximum value of diffraction intensity of a $\text{Fe}_{1-x}\text{Ni}_x$ (311) plane and the maximum value of diffraction intensity of a Fe(211) plane in X-ray diffraction satisfies the following formula (1): $\text{IFe1Ni1311}/\text{IFe211} \geq 0.015$

IPC 8 full level
C25D 7/06 (2006.01); **C25D 5/12** (2006.01); **C25D 5/16** (2006.01); **C25D 5/26** (2006.01); **C25D 5/50** (2006.01); **H01M 4/66** (2006.01)

CPC (source: EP KR US)
C25D 3/12 (2013.01 - KR); **C25D 3/562** (2013.01 - KR); **C25D 5/12** (2013.01 - EP KR); **C25D 5/14** (2013.01 - EP); **C25D 5/16** (2013.01 - KR); **C25D 5/34** (2013.01 - KR); **C25D 5/50** (2013.01 - EP KR); **C25D 5/60** (2020.08 - KR); **C25D 5/605** (2020.08 - EP); **C25D 7/06** (2013.01 - KR); **C25D 7/0614** (2013.01 - EP); **H01M 4/66** (2013.01 - EP KR); **H01M 4/661** (2013.01 - EP); **H01M 4/667** (2013.01 - EP US); **H01M 4/669** (2013.01 - US); **H01M 4/75** (2013.01 - US); **Y02E 60/10** (2013.01 - EP KR)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4332274 A1 20240306; CN 117203376 A 20231208; JP WO2022231008 A1 20221103; KR 20240000450 A 20240102; US 2024222645 A1 20240704; WO 2022231008 A1 20221103

DOCDB simple family (application)
EP 22795921 A 20220428; CN 202280031143 A 20220428; JP 2022019465 W 20220428; JP 2023517637 A 20220428; KR 20237029901 A 20220428; US 202218557608 A 20220428